

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGION

SW 6950.11C

8/15/01

SUBJ: SOUTHWEST REGION POLICY PERTAINING TO WORK ON ELECTRICAL POWER
DISTRIBUTION SYSTEMS

- 1. PURPOSE.** This order provides policy and specific guidance for performing work on electrical distribution systems at operating facilities.
- 2. DISTRIBUTION.** This order is distributed to branch level in the Air Traffic and Flight Standards Divisions, NAS Implementation Center, ANI-600, to section level in the Airway Facilities Division, and to all Airway Facilities field offices.
- 3. CANCELLATION.** Order SW 6950.11B, Southwest Regional Policy Pertaining to Work On Electrical Power Distribution Systems, dated February 13, 1997, is canceled.
- 4. BACKGROUND.** In the past, the Southwest Region has experienced major facility/service outages as a result of installation and maintenance activities involving electrical power distribution systems. These outages, which occurred during periods of high air traffic activity, had a major impact on the air traffic control system and on the users of the system, particularly air carrier operations. The outages caused arrival and departure delays, flow restrictions, and numerous aircraft to be diverted to alternate airports. Not with standing the need for reliable power there is also a recognized need for completing required preventive maintenance. The Air Route Traffic Control Center (ARTCC) Critical and Essential Power System (ACEPS) requires some module periodic maintenance procedures to be accomplished on the off line maintenance bus. Some of these checks also require the presence of two people to accomplish the procedure. The ACEPS provides isolation between the on line bus and the off line maintenance bus. This allows maintenance to be completed on the off line maintenance bus without interfering with the active bus that is supplying power to the system maintaining the NAS operating environment.
- 5. EXPLANATION OF CHANGES.** This change replaces all standby bus references with off line maintenance bus. It allows preventive maintenance to equipment on the off line maintenance bus during normal duty times with appropriate notifications and safe guards. It also recognizes the current organizational structure of ANI-600.

6. POLICY. The policy of the Airway Facilities Division is that positive steps shall be taken to minimize operation impact and to ensure personnel safety by following the precautionary procedures outlined in this paragraph BEFORE any work is performed on electrical power distribution systems at operating facilities. These procedures shall be strictly adhered to by all Airway Facilities Division personnel as well as outside contractors performing work on any electrical power distribution system.

a. Addition or deletion of any circuits, or activity to the ACEPS on line bus that could result in accidental disruption of power to facilities in the NAS will be scheduled and accomplished at times of minimum or acceptable impact on air traffic activity should a disruption occur.

b. Addition or deletion of any circuits, or activity, to non ACEPS equipment that could result in accidental disruption of power to facilities in the NAS will be scheduled and accomplished at times of minimum or acceptable impact on air traffic activity should a disruption occur.

c. Voltage should be removed if there is a danger of accidental injury to personnel or damage to equipment due to proximity of such voltage.

d. Personnel performing the work must be knowledgeable of the power distribution system involved or accompanied by a knowledgeable person. This knowledge will include:

(1) What the power distribution system or component feeds.

(2) How to de-energize the system or component.

(3) The impact on operations of the system or component.

(4) The impact on operations of adjacent systems or components, if affected.

e. Work performed by Federal Aviation Administration (FAA) contractors shall be performed under the supervision of a licensed master electrician. All work shall be done in accordance with the National Electric Code and FAA standards.

7. RESPONSIBILITIES.

a. NAS Implementation Center, ANI-600, shall:

(1) Coordinate all planned activities involving work on any electrical power distribution system with the appropriate System Management Office (SMO) Manager or designee.

(2) Update the facility power interface drawings and the electrical distribution panel directories if new power equipment is installed.

(3) Provide FRDF data to the SMO in a form suitable for inclusion in the FRDF with minimal or no editing.

(4) During the pre-engineering meetings, determine the agreed approach to facilitate the electrical installation.

(5) During pre-construction meetings, emphasize the importance of adherence to the approved approach to facilitate the electrical installation.

b. Operations Branch, ASW-470, shall: coordinate with ANI-600 and the SMO involved, as appropriate, when any work/activity is planned pertaining to the electrical power distribution systems at major facilities. This work/activity includes, but is not limited to:

- (1) New installations.
- (2) Modifications.
- (3) Routine periodic maintenance.
- (4) Routine or special technical evaluations.

c. SMO Manager or his designee shall:

(1) Assign an individual who is knowledgeable of the electrical power distribution system (when required) as indicated in paragraph 6c.

(2) Ensure that appropriate personnel at each facility/system within their jurisdiction are fully aware of the power distribution system and the impact of an unscheduled interruption.

(3) Ensure facility power interface drawings and electrical panel directories are up to date.

(4) At all facilities with ACEPS equipment take action to ensure that routine periodic maintenance activities involving the on line bus are performed only during low air traffic activity periods. Also conduct periodic briefings, provide local training, and post appropriate warning signs with operational instructions. Routine periodic maintenance activities involving the off line maintenance bus may be performed at any time following the guidelines of this order.

(5) Ensure that the technician switching ACEPS modules on the off line maintenance bus are being observed by another trained technician and that they both agree on what switches to actuate, in what order, before any switching is done.

(6) Ensure all work performed on critical power systems, or essential power systems, or off line maintenance bus, is approved by the System Support Center supervisor in coordination with Air Traffic and the MCC.

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